

CLAIMS

What is claimed is:

1           1.       A system for establishing a secure execution environment for a  
 2 software process executed by a program operating on a computer, comprising:  
 3           a software process operating on a computer, said software process including a  
 4 plurality of attributes;  
 5           an operating system kernel in communication with said software process and  
 6 in communication with an executable file to be accessed by said software process; and  
 7           a system call trap associated with said operating system kernel, said system  
 8 call trap configured to assign a selected plurality of said attributes to said software  
 9 process, said selected plurality of attributes stored in association with said executable  
 10 file.

1           2.       The system of claim 1, wherein said system call trap further comprises:  
 2           a process attribute extension; and  
 3           an access token extension associated with said process attribute extension, said  
 4 access token extension including said selected plurality of attributes.

1           3.       The system of claim 1, wherein said selected plurality of attributes are  
 2 contained in a database associated with said executable file.

1           4.       The system of claim 1, wherein said selected plurality of attributes are  
 2 chosen from the group consisting of user ID, group IDs and privileges.

1           5.       The system of claim 1, wherein said execution environment isolates  
2       said software process from any other software process operating on said computer.

1           6.       The system of claim 1, wherein said software process is a web server  
2       process.

1           7.       The system of claim 1, wherein said software process is a file transfer  
2       process.

1           8.       The system of claim 1, wherein said software process is a mail server  
2       process.

1           9.       The system of claim 1, wherein said selected plurality of attributes are  
2       associated to said software process upon execution of said software process.

1           10.      The system of claim 1, wherein said selected plurality of attributes  
2       replaces any existing attributes associated with said software process.

1 11. A method for establishing a secure execution environment for a  
2 software process executed by a program operating on a computer, the method  
3 comprising the steps of:  
4 operating a software process on a computer, said software process including a  
5 plurality of attributes;  
6 executing an operating system kernel in communication with said software  
7 process, said operating system kernel in communication with an executable file to be  
8 accessed by said software process; and  
9 assigning a selected plurality of said attributes to said software process, said  
10 selected plurality of attributes stored in association with said executable file.

1 12. The method of claim 11, further comprising the steps of:  
2 executing a process attribute extension; and  
3 executing an access token extension associated with said process attribute  
4 extension, said access token extension including said selected plurality of attributes.

1 13. The method of claim 11, wherein said selected plurality of attributes  
2 are contained in a database associated with said executable file.

1 14. The method of claim 11, wherein said selected plurality of attributes  
2 are chosen from the group consisting of user ID, group IDs and privileges.

1 15. The method of claim 11, wherein said execution environment isolates  
2 said software process from any other software process operating on said computer.

1           16.    The method of claim 11, wherein said software process is a web server  
2    process.

1           17.    The method of claim 11, wherein said software process is a file transfer  
2    process.

1           18.    The method of claim 11, wherein said software process is a mail server  
2    process.

1           19.    The method of claim 11, wherein said selected plurality of attributes  
2    are associated to said software process upon execution of said software process.

1           20.    The method of claim 11, wherein said selected plurality of attributes  
2    replaces any existing attributes associated with said software process.

1           21.     A computer readable medium having a program for establishing a  
2     secure execution environment for a software process executed by a program operating  
3     on a computer, the program including logic for performing the steps of:  
4           operating a software process on a computer, said software process including a  
5     plurality of attributes;  
6           executing an operating system kernel in communication with said software  
7     process, said operating system kernel in communication with an executable file to be  
8     accessed by said software process; and  
9           assigning a selected plurality of said attributes to said software process, said  
10    selected plurality of attributes stored in association with said executable file..

1           22.     The program of claim 21, further comprising logic for performing the  
2     steps of:  
3           executing a process attribute extension; and  
4           executing an access token extension associated with said process attribute  
5     extension, said access token extension including said selected plurality of attributes.

1           23.     The program of claim 21, wherein said selected plurality of attributes  
2     are contained in a database associated with said executable file.

1           24.     The program of claim 21, wherein said selected plurality of attributes  
2     are chosen from the group consisting of user ID, group IDs and privileges.

1           25.    The program of claim 21, wherein said execution environment isolates  
2   said software process from any other software process operating on said computer.

1           26.    The program of claim 21, wherein said software process is a web  
2   server process.

1           27.    The program of claim 21, wherein said software process is a file  
2   transfer process.

1           28.    The program of claim 21, wherein said software process is a mail  
2   server process.

1           29.    The program of claim 21, wherein said selected plurality of attributes  
2   are associated to said software process upon execution of said software process.

1           30.    The program of claim 21, wherein said selected plurality of attributes  
2   replaces any existing attributes associated with said software process.

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